

PARABAM

Environmentally Controlled MOBILE CZR-1 CAMERA ENCLOSURE

TECHNICAL BULLETIN
NO. 1161-10



PARABAM

DIVISION OF
HOUSTON FEARLESS CORPORATION



The Parabam Mobile CZR-1 CAMERA ENCLOSURE is an astrodome-type shelter. It is designed for installation on the trailer-mounted precision three-axis instrument mount originally developed by the Naval Ordnance Test Station. This enclosure consists of a lightweight, insulated rotatable dome and stationary base supported by a platform structure mounted on the carriage assembly. *The astrodome shelter is constructed to provide protection—during operation and storage—against solar radiation, thermal distortion, dust, wind and rain.*

Accuracy of data is improved by shielding the mount and the camera from direct solar radiation, thereby minimizing unknown camera position shift as well as optical degradation of image and possible film damage. By stabilizing the mount and camera at the anticipated outside temperature at the time of opening the dome aperture, thermal shock is eliminated and differential expansion is minimized.

Range efficiency is increased by the reduction of downtime and by the reduction of maintenance costs resulting from corrosion and dust.

MOBILE CZR-1 CAMERA ENCLOSURE Specifications

CONSTRUCTION and PERFORMANCE

TRAILER MODIFICATIONS — Original springs have been replaced by springs of increased capacity. The camera driver rack and other miscellaneous items are relocated to permit installation of the support platform.

SUPPORT PLATFORM — Of welded aluminum construction. Platform provides support for the enclosure and convenient working area for personnel.

STATIONARY BASE AND ROTATABLE DOME — Of sandwich-type construction with two skins of polyester-impregnated fiberglass cloth bonded to a thermal insulating paper honeycomb core. The base has weather and dust tight personnel access door. The dome aperture is sealed by a hand-crank operated door which is latched against a weather and dust tight seal by means of cable operated latches. Five sets of rollers mounted on the base, support the rotating dome, and dome is sealed against the base by dome-mounted toggle jacks which cause dome to raise and compress seal. The roller track and seal angle are of solid laminate fiberglass construction molded in place to form an integral part of the dome.

AIR CONDITIONING SYSTEM — A special low temperature air conditioner with electric strip heater holds predetermined temperature within 5°F over a temperature range of 30° to 100°F and holds humidity to less than 50%. Preselected temperature can be obtained within one hour with an inside-outside differential of 30°F.

DETAILED SPECIFICATIONS

Environmental Performance

Ambient Temp. Range (operating).....	-40°F to +125°F
(non-operating).....	-65°F to +160°F
Wind Load (operating).....	30 mph steady, gusts to 50 mph
(non-operating).....	130 mph
Thermal Conductivity.....	Less than 0.4 BTU/hr/sq. ft./°F

Dimensions (Approx.)

Height (Travel mode).....	120 in.
Aperture Width.....	41 in.
Aperture Elevation Opening.....	7° below horizontal to 5° beyond zenith

Weight (Approx.)

Dome & Base Collar Assy.	535 lbs.
Support Platform.....	200 lbs.

Power Requirement..... 120/208 VAC, 1Ø. 60~

Air Conditioning (Optional)

Range.....	30°F to 100°F within 5°F
Relative Humidity.....	Less than 50%
Temperature Differential.....	30°F within one hour
Weight.....	250 lbs.
Power Req.	8.5 KVA MAX 120/208 VAC, 3Ø. 60~

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